NUCLEAR REGULATORY COMMISSION WEATHER PROGRAMS

The United States Nuclear Regulatory Commission (NRC) licenses and regulates all nuclear facilities subject to the Atomic Energy Act of 1954 as amended. The licensing and operation of these nuclear facilities require the identification of meteorological and climatological conditions that can affect the safe operation of the facility, and that provide input to the assessment of the radiological impacts of any airborne releases from the facility.

Within the NRC, the Offices of Nuclear Reactor Regulation and New Reactors conduct reviews of nuclear power plant siting, design, construction, and operation while the Offices of Nuclear Material Safety and Safeguards and Federal and State Materials and Environmental Management Programs conduct similar reviews of materials and waste facilities. These reviews include consideration of meteorological factors. The offices also conduct rulemaking to establish regulatory requirements. The NRC Regional Offices assure that licensing conditions are followed by NRC licensees. Together with the NRC Incident Response Operations, they also carry out NRC responses to nuclear facility emergencies.

The Office of Nuclear Regulatory Research (RES) conducts research in various categories to identify potential safety issues, and to prepare the agency to regulate the use of new technology. RES also develops regulatory guidance and participates in the development of criteria and consensus standards related to the protection of the public health and safety and the environment.

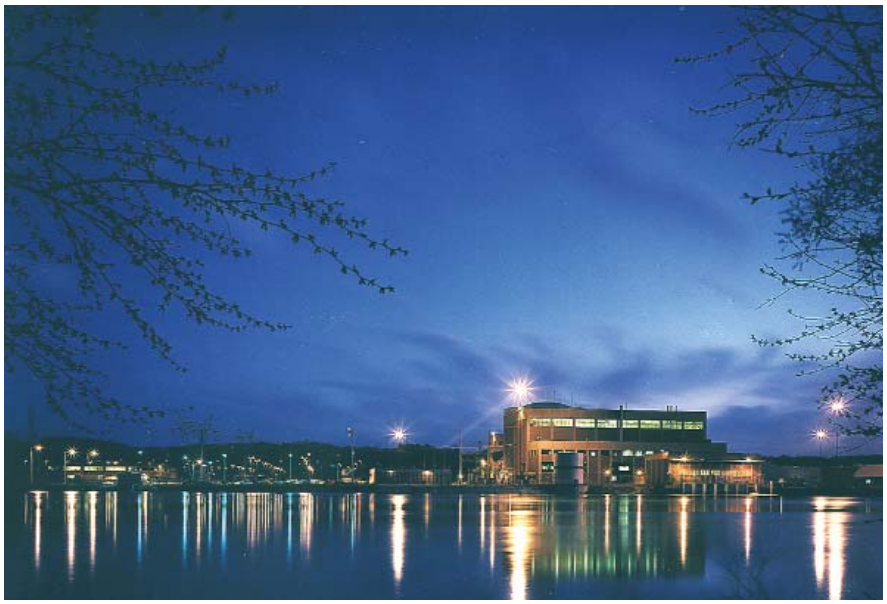

Figure 3-NRC-1. Fort Calhoun Nuclear Power Plant (NRC Image)

At the present time, the NRC is a user of meteorological information, rather than a performer of research in this field. Meteorological data will be used to assess radiological impacts of routine airborne releases from facilities, to evaluate the impact of proposed changes in plant design or operation on unplanned releases, and to evaluate new reactor designs or sites. Information of this type is also important for developing scenarios of climatological impacts on the isolation of long-lived nuclear wastes. The NRC also maintains an interest in the transport and dispersion of airborne, hazardous, nonradioactive materials, and the effects of extreme meteorological events on the safe operation of nuclear facilities.